

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte TAI-SHENG CHOU, NAI Y. CHEN,  
GRANT G. KARSNER, CLINTON R. KENNEDY, RENE B. LAPIERRE,  
MELCON G. MELCONIAN, RICHARD J. QUANN,  
and STEPHEN S. WONG

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Appeal No. 1998-0556  
Application No. 08/367,418

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ON BRIEF

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Before GARRIS, WARREN, and TIMM, Administrative Patent Judges.  
GARRIS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal from the final rejection of claims 11 through 20 which are all of the claims remaining in the application. On page 1 of the brief, the appellants state that "[t]he appeal is withdrawn with respect to claims

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11-16." As a consequence, the only claims now before us on this appeal are claims 17 through 20.

The subject matter on appeal relates to a method of controlling the stability of an isomerization dewaxing process wherein a waxy hydrocarbon fraction is contacted with a dewaxing catalyst comprising zeolite beta and a noble metal such as platinum and wherein the method comprises injecting ammonia into the reactor to contact the catalyst in amounts sufficient to maintain operating temperatures below 900°F. The ammonia is injected at at least 1 point, such as at at least 3 points, along the length of the dewaxer reactor. A copy of the appealed dependent claims 17 through 20 along with a copy of nonappealed parent independent claim 11, taken from the appellants' brief, is appended to this decision.

The references relied upon by the examiner as evidence of obviousness are:

LaPierre et al. (LaPierre)	4,419,220	Dec. 6,
1983		
Ward et al. (Ward)	4,428,825	Jan. 31,
1984		

Claims 17 through 20 stand rejected under 35 U.S.C. § 103 as being unpatentable over Ward in view of LaPierre.

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We refer to the brief and to the answer for a thorough discussion of the opposing viewpoints expressed by the appellants and by the examiner concerning the above noted rejection.

#### OPINION

This rejection cannot be sustained.

On the third and fourth pages of the answer, the examiner expresses his basic position as follows:

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process of Ward by utilizing a zeolite beta catalyst as suggested by LaPierre in place of the zeolite catalysts disclosed by Ward because higher liquid and lower gas yields result.

It also would have been obvious to one having ordinary skill in the art at the time the invention was made to have optimized the Ward process as modified by LaPierre by optimizing amounts of ammonia added, optimizing the number of points of additions, optimizing noble metal amounts, and optimizing operating temperature ranges because such optimization has been held to be within the level of ordinary skill in the art where, as here, the general conditions of the claims are disclosed. (See In re Aller, 105 USPQ 233, 235 (CCPA 1955)).

In order to establish a prima facie case of obviousness, the applied prior art must provide a suggestion to modify the

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prior art subject matter in such a way as to result in an applicant's claimed subject matter and must provide a reasonable expectation that the aforementioned modification would be successful. In re O'Farrell, 853 F.2d 894, 903-04, 7 USPQ2d 1673, 1680-81 (Fed. Cir. 1988). As correctly indicated by the appellants, the respective processes of Ward and LaPierre involve two different types of dewaxing processes. Specifically, the Ward reference is directed to a hydrodewaxing process wherein ammonia is added to the reactor in order to render the catalyst more selective for cracking waxy components (e.g., see lines 3 through 14 in column 2 and lines 57 through 60 in column 7). On the other hand, the LaPierre reference is directed to a process for dewaxing feedstocks "by isomerizing the waxy paraffins without substantial cracking" by using as a catalyst zeolite beta preferably in combination with a hydrogenation component such as platinum (see lines 8 through 19 and especially lines 9 and 10 in column 2; emphasis added).

It is the examiner's conclusion, as previously noted, that it would have been obvious for an artisan with ordinary skill "to have modified the process of Ward by utilizing a

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zeolite beta catalyst as suggested by LaPierre in place of the zeolite catalysts disclosed by Ward because higher liquid and lower gas yields result." From our perspective, however, this obviousness conclusion is of highly questionable validity. This is because Ward dewaxes feedstock by a cracking mechanism in which selectivity is enhanced via the addition of ammonia whereas, in contrast, LaPierre dewaxes feedstock by isomerizing waxy paraffins "without substantial cracking" via his zeolite beta catalyst. Under these circumstances, the applied reference teachings would not have suggested replacing the cracking catalyst in Ward's process with the isomerization catalyst of LaPierre particularly since the latter effects an isomerization reaction without substantial cracking. For analogous reasons, the applied references would not have provided the artisan with a reasonable expectation that the examiner's proposed modification would be successful, particularly since the ammonia-addition step of Ward's process functions to enhance cracking selectivity whereas LaPierre's zeolite beta catalyst functions to isomerize without substantial cracking.

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In light of the foregoing, it is our determination that the applied references lack a suggestion to modify and a reasonable expectation of success as required in order to establish a prima facie case of obviousness within the meaning of 35 U.S.C. § 103. In re O'Farrell, id. It follows that we cannot sustain the examiner's section 103 rejection of appealed claims 17 through 20 as being unpatentable over Ward in view of LaPierre.

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The decision of the examiner is reversed.

REVERSED

	Bradley R. Garris	)	
	Administrative Patent Judge	)	
		)	
		)	
		)	
	Charles F. Warren	)	BOARD OF
PATENT	Administrative Patent Judge	)	APPEALS AND
		)	INTERFERENCES
		)	
		)	
	Catherine Timm	)	
	Administrative Patent Judge	)	

BRG:tdl

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APPENDIX

17. The method according to claim 11 wherein said zeolitic dewaxing catalyst comprises from .01 to 2 wt% noble metal.

18. The method according to claim 11 wherein said zeolitic dewaxing catalyst comprises from .1 to 1 wt% platinum.

19. The method according to claim 11 wherein said injection of ammonia is made at at least one point along the length of the dewaxer reactor.

20. The method according to claim 11 wherein said injection of ammonia is made at at least three points along the length of the dewaxer reactor.

11. A method of controlling the stability of an isomerization dewaxing process in which a waxy hydrocarbon fraction is contacted under dewaxing conditions with a zeolitic dewaxing catalyst comprising zeolite beta in a dewaxing reactor having an inlet and an outlet, the method comprising injecting ammonia vapor into the reactor to contact the catalyst in amounts sufficient to maintain operating temperatures in said dewaxing reactor below 900°F.